# Before the FEDERAL COMMUNICATIONS COMMISSION Washington, DC 20554

In the Matter of	)	
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act	)	GN Docket No. 09-47
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps To Accelerate	)	GN Docket No. 09-137
Such Deployment Pursuant To Section 706 of the Telecommunications Act of 1996	)	

## COMMENTS OF THE OPEN MOBILE VIDEO COALITION NBP PUBLIC NOTICE #26

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### TABLE OF CONTENTS

Table	of Contents	i
Summ	nary	1
I.	Mobile DTV Is Vital To the Nation's Broadband Future Because of Its Unique and Complementary Ability To Transport High-Quality Video Efficiently To Millions of Mobile and Fixed Devices.	2
II.	Mobile DTV Is an Efficient and Innovative Use of Local Stations' Spectrum that Maximizes the Public Interest Benefits of the DTV Transition	4
III.	The OMVC and the Industry Are Facilitating the Widespread Roll-out of Mobile DTV Services.	5
IV.	Consumer Demand for Mobile Video Is Strong and Will Grow Over the Next Decade.	8
V.	Any Measure of Broadcast Television's Economic Value Must Account for the Public Goods Associated with Mobile DTV.	11
Concl	usion	15

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The Open Mobile Video Coalition ("OMVC") submits these comments to urge the Commission to recognize the vital and complementary role of mobile digital television in advancing the nation's broadband policy and to provide the Commission with important information regarding the widespread commercial launch of Mobile DTV by local television stations. The OMVC is an alliance of over 800 commercial and public television stations nationwide that are dedicated to advancing the development of Mobile DTV in the United States utilizing local television broadcasters' existing spectrum assets.

#### SUMMARY

Local broadcasters have built the most accessible, high-speed, high-capacity wireless video transmission system in the country, making them the preeminent provider of broadband video services to the public. The Mobile DTV system enables consumers to receive video programming and data through a variety of mobile and portable devices, such as mobile

phones, netbooks, laptops, portable media players and backseat entertainment systems in vehicles. Because Mobile DTV can efficiently provide popular live, local and satellite-delivered network television content and other information to millions of consumers, Mobile DTV is a critical component of the nation's broadband future.

Innovative Mobile DTV broadband technology benefits consumers and maximizes the value of the DTV transition. In addition to watching free live, local and national network television programming while on the go, consumers can receive real-time news, weather, traffic and emergency alerts and record their favorite programs for viewing at a later time. In addition, Mobile DTV provides a variety of public interest benefits that are not accounted for in traditional economic models, including increased competition in the market for mobile video services and expanded access to free and reliable public safety alerts.

I. Mobile DTV Is Vital To the Nation's Broadband Future Because of Its Unique and Complementary Ability To Transport High-Quality Video Efficiently To Millions of Mobile and Fixed Devices.

Mobile video accounts for much of the commercial wireless carriers' perceived increase in spectrum requirements and the costs associated with network congestion. According to CTIA, watching video using a wireless broadband connection "consumes almost one hundred times the data bandwidth of a voice conversation" and by 2013 "nearly 64 percent of the world's mobile traffic will be video."

Video distribution technologies that rely on a one-to-one communications architecture are often an inefficient way to deliver uninterrupted, high quality video content to a mass audience. For example, due to network congestion during the inauguration ceremony for

<sup>&</sup>lt;sup>1</sup> Comments of CTIA — The Wireless Association: NBP Public Notice # 6, GN Docket Nos. 09-47, 09-51, 09-137, at 30 (Oct. 23, 2009).

President Obama — an event that followed months of planning and preparations by communications services providers — many consumers were unable to receive online streaming video.<sup>2</sup> The effects of network outages and congestion are even more severe during an unanticipated event or an emergency.

Mobile DTV is an innovative way to solve these capacity challenges and reduce network congestion, without reallocating *any* spectrum, by having local television stations do what they do best — deliver video wirelessly to receivers. Even experts for the wireless industry have acknowledged the significant role of Mobile DTV in delivering mobile video to the public.<sup>3</sup> Mobile DTV is a highly efficient one-to-many means of delivering video content. Indeed, with a single broadcast television transmitter and antenna, a local station can serve high quality, digital video programming to a potentially unlimited number of viewers. Mobile DTV streams are carried within the station's existing 6 MHz digital channel. Moreover, with Mobile DTV, consumers can personalize their mobile video viewing experience by supplementing real-time television and information services with video-on-demand and time-shifting features. By offering a reliable alternative for distributing video programming to mobile and portable devices, Mobile DTV helps relieve network congestion, while at the same time maintaining or improving the quality of the end-user experience.

<sup>&</sup>lt;sup>2</sup> Associated Press, "Cell Phone Service Patchy for Those at Inauguration," SAN JOSE MERCURY NEWS (Jan. 21, 2009).

<sup>&</sup>lt;sup>3</sup> See Unwired Insight, 3G Networks Will Evolve, But Will They Cope?, at 6 (Sept. 2009), available at http://www.unwiredinsight.com/PDF/Unwired%20Insight%20white%20paper.pdf.

#### II. Mobile DTV Is an Efficient and Innovative Use of Local Stations' Spectrum that Maximizes the Public Interest Benefits of the DTV Transition.

Billions of dollars were spent preparing for the DTV transition that was completed just six months ago. Millions of consumers purchased new television receivers or converter boxes to ensure that they could receive digital television signals; broadcasters invested substantial financial and human resources to upgrade their facilities and train employees; and the nation's taxpayers contributed millions of dollars to fund the government's management of the transition and to subsidize the converter box coupon program.

One of the stated rationales for undertaking the digital television transition was that it would enable consumers to benefit from a variety of new television services that were not technically feasible under the analog television broadcasting system.<sup>4</sup> As a result of the DTV transition, local digital stations can now efficiently use their 6 MHz channel to offer consumers advanced television services, such as high definition content, multicast channels, and Mobile DTV. Bit rates will vary depending on the number and content of Mobile DTV streams delivered over a 6 MHz channel, but a local station can transmit over a dozen Mobile DTV streams while maintaining a high-quality SD signal for delivery to conventional ATSC digital television sets in consumers' homes.

Some of the proposals being considered by the Broadband Task Force, however, would make it difficult or impossible for local stations to continue offering innovative services like Mobile DTV, as well as multicasting and HDTV. The Public Notice describes, for example, an approach in which several broadcast stations in a market would surrender their 6 MHz

<sup>&</sup>lt;sup>4</sup> See, e.g., H.R. Rep. 101-1026, 101st Cong., 2nd Sess., at 133-134 (1990).

channels and be "restacked" on a single 6 MHz channel.<sup>5</sup> In the vast majority of the nation's television markets, a single 6 MHz channel would be an insufficient amount of spectrum for all, or even any, of the "restacked" stations to supplement their primary video service with enhanced service offerings like Mobile DTV. Such an outcome, particularly if the broadcasters' participation were involuntary, would undermine the public interest by denying viewers access to a robust, free wireless video broadband system and premium broadcast services.

### III. The OMVC and the Industry Are Facilitating the Widespread Roll-out of Mobile DTV Services.

The Mobile DTV system is the product of an intense, multi-industry effort in the United States to provide consumers an efficient and reliable means for receiving local and national television services over mobile and portable devices. The Advanced Television Systems Committee (the same international standards organization that developed the original technical standards for digital television), working with all the industry stakeholders, adopted an 850-page technical standard for Mobile DTV in just over two years. ATSC also is facilitating the adoption of the U.S. mobile DTV standard in Canada and Mexico, which have selected the ATSC DTV standard as their digital television transmission standard.

The Mobile DTV standard is an open standard that is readily adaptable to keep pace with developments in technology. The open standard facilitates interoperability and therefore promotes the rapid development of innovative Mobile DTV products and services by both device manufacturers and applications developers. The standard already addresses the full range of technical issues associated with Mobile DTV, including video and audio compression,

<sup>&</sup>lt;sup>5</sup> Data Sought on Uses of Spectrum: NBP Public Notice # 26, DA 09-2518, at 2 (Dec. 2, 2009) (hereinafter "NBP Public Notice # 26").

file delivery and content protection, and can be updated easily to address advancements in the underlying devices and technology.

Local television stations, mobile and portable device manufacturers, and equipment manufacturers are coordinating closely to ensure that consumer devices and transmission equipment meet the Mobile DTV technical standard. Earlier this month, the Consumer Electronics Association hosted a four-day "ATSC Mobile DTV Plugfest," which provided more than 15 participating companies an opportunity to test the open architecture of the Mobile DTV system and its consumer usability. For example, consumer device manufacturers tested the interoperability of their devices and confirmed that user features, such as the Mobile DTV programming guide, are correctly displayed. According to CEA's Vice President of Technology and Standards, "CEA is taking a lead role in promoting rapid deployment of Mobile DTV services" and is "delighted to work with our broadcast partners to get this technology into consumers' hands."

A wide variety of consumer devices are being manufactured for Mobile DTV, including an assortment of USB laptop receivers, portable television sets, and receivers that distribute Mobile DTV signals to compatible smartphones and laptop computers. More than twenty-five companies already are manufacturing innovative consumer products, and several commercial device announcements are expected to be made at the Consumer Electronics Show in January, where the OMVC will be sponsoring the "Mobile DTV TechZone." For example, Dell will be demonstrating a prototype netbook with embedded Mobile DTV reception capability

<sup>&</sup>lt;sup>6</sup> Consumer Electronics Association, Press Release, "CEA Advances Mobile DTV Through Plugfest" (Dec. 10, 2009), http://www.ce.org/Press/CurrentNews/press release detail.asp?id=11844.

that is expected to be available in stores in less than eighteen months. Also featured will be USB receivers, or "dongles," that enable consumers to receive Mobile DTV signals on their existing laptop computers. And LG Electronics will be demonstrating a portable Mobile Digital Television that is expected to be commercially available in the Spring. Some images of these products are attached.

Last week, the ATSC launched a certification program for transmission equipment and consumer devices that comply with the new Mobile DTV technical standard.

Manufacturers may use the certification mark shown below in accordance with the ATSC's Certification Mark Policy.<sup>7</sup> The program provides for expert reviewers, independent laboratory testing, and verifications to help ensure compliance with the policy.



Local television stations, equipment manufacturers and device manufacturers also continue to test the Mobile DTV system in preparation for the nationwide commercial launch. In conjunction with eight Washington and Baltimore area television stations, the OMVC is leading a Mobile DTV Consumer Showcase in the first quarter of 2010 where consumers will be able to view Mobile DTV content, such as local news and national entertainment programming, and experience new services and features, including the Mobile DTV electronic service guide and interactive applications, such as voting, polling and web access. While the Showcase will focus on consumers, four model broadcast stations — two each in Atlanta, Georgia and Seattle,

<sup>&</sup>lt;sup>7</sup> See http://www.atsc.org/policy documents/.

Washington — are providing device manufacturers a means for testing devices in a real-world environment. In coordination with the Consumer Electronics Association's Special Interest Group, device manufacturers can schedule visits for testing at the model stations, which serve two of the top-twenty television markets.<sup>8</sup>

At least 70 stations in 28 markets have committed to launch Mobile DTV services in the coming year, and approximately 30 of these stations already are on the air with Mobile DTV; additional market launch announcements are expected during 2010. This initial phase includes both public and commercial television stations. Twenty-one station groups are participating, including affiliates from the ABC, CBS, NBC, FOX, ION, MyNetwork TV, and CW networks. The Spanish-language network Univision also has recently indicated its interest in participating. More stations are expected to commence Mobile DTV services after the initial phase.

Mobile DTV services can be rapidly deployed to the public because the basic infrastructure for Mobile DTV already is in place. Because Mobile DTV uses local stations' existing towers and transmission infrastructure, the stations are well positioned to offer local Mobile DTV services to the public, including consumers in rural areas that are unserved or underserved by broadband. These services are being deployed *now* — without the recapture or repurposing of any spectrum and without the construction of network infrastructure.

## IV. Consumer Demand for Mobile Video Is Strong and Will Grow Over the Next Decade.

U.S. consumers have come to expect that they will be able to access content, including high-quality, live, local and national satellite-delivered video programming, anytime

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<sup>8</sup> See http://sites.google.com/site/atscmh/home.

and anywhere on their portable and mobile devices. As a result, consumer demand in the United States for Mobile DTV is increasing rapidly. The demand for mobile video between the last quarter of 2008 and the first quarter of 2009, for instance, increased 61 percent.<sup>9</sup>

The ability to receive live, local broadcast content, in particular, is driving consumer demand for Mobile DTV. News programming is one of the top two mobile video categories for consumers, <sup>10</sup> and a nationwide survey found that nearly nine out of ten respondents expressed interest in watching live news and weather programming on mobile and portable devices. <sup>11</sup> At the same time, 65 percent of respondents expressed an interest in watching entertainment programming on mobile and portable devices, and 44 percent expressed an interest in sports programming. <sup>12</sup>

Local television stations, which have a longstanding history of serving their communities, are uniquely positioned to provide live local television services that are responsive to viewer needs, interests and concerns. With news and weather crews on the ground in all 210 television markets, local stations are the most reliable network for delivering breaking news information and weather alerts, as well as traffic updates and other real-time information, live and on location, to the public. Consumers also receive a diverse range of free entertainment and sports programming through their local broadcast television stations, including coverage of local

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<sup>&</sup>lt;sup>9</sup> Press Release, QuickPlay Media Sees Continued Demand for Mobile TV and Video Content in Q1 2009 (May 11, 2009), http://www.quickplay.com/pressItem\_049.htm.

<sup>10</sup> Id.

<sup>&</sup>lt;sup>11</sup> Frank N. Magid Associates, Inc., *The OMVC Mobile TV Study: Live, Local Programming Will Drive Demand for Mobile TV*, at 1 (2009) (hereinafter "Magid Associates Study").

<sup>12</sup> Id.

high school sports games and events. With Mobile DTV, consumers' access to this popular, high-quality, live, local and network content will be greatly expanded.

The myth that U.S. consumers will refuse to watch video programming on anything but a large television screen has been debunked repeatedly. A national study conducted by Magid Media Labs in partnership with OMVC determined, for instance, that nearly 50 percent of respondents found the idea of watching live digital television on a mobile device "appealing" and said they are likely to consider purchasing a mobile device that allows them to watch live digital television. <sup>13</sup>

Interest in Mobile DTV is particularly high among "Millennial" consumers ages 18 to 29. Approximately 65 percent of Millennials rate live Mobile DTV as "very" or "somewhat" appealing, and 72 percent express an interest in receiving emergency reports, such as school closings and severe weather information. <sup>14</sup> Interest among Millennials in local news and information content on Mobile DTV is double their current daily consumption on television. <sup>15</sup>

Moreover, while Americans are interested in time-shifted viewing and video-ondemand features, real-time viewing remains an important and desirable component of consumers' video experience. Approximately 51 percent of respondents reported that they want live programming to be part of the Mobile DTV experience.<sup>16</sup>

<sup>14</sup> *Id.* at 2–3.

<sup>&</sup>lt;sup>13</sup> *Id*.

<sup>15</sup> Id. at 1.

<sup>&</sup>lt;sup>16</sup> Id.

Strong consumer demand for Mobile DTV in the U.S. is consistent with the rising global demand for mobile television services. In Japan, for instance, broadcasters began offering mobile television service in 2006 and had approximately 70 million mobile television viewers just three years later. <sup>17</sup> Similarly, over-the-air mobile television service is the predominant method for consumers in South Korea to view video on mobile and portable devices; South Korean consumers are nine times more likely to watch mobile television content over-the-air than they are to watch online video clips downloaded to their mobile phone. <sup>18</sup>

## V. Any Measure of Broadcast Television's Economic Value Must Account for the Public Goods Associated with Mobile DTV.

In evaluating the "future economic value" of over-the-air television broadcasting, <sup>19</sup> the Commission should look beyond purely economic factors, which ignore the public goods and positive externalities associated with Mobile DTV. These include, for example:

Increased Competition for Mobile Video Services. Many wireless carriers offer mobile video services on a subscription basis.<sup>20</sup> In order to access Internet video content, consumers must subscribe to a data plan. A data plan typically requires a fixed monthly fee of at least \$30; meanwhile, some wireless carriers are considering implementing tiered-service and

<sup>&</sup>lt;sup>17</sup> See Ernst &Young, Mobile Television and Its Impact on Business: The Big Picture on Small Screen Opportunities, at 6 (2009), http://www.ey.com/Publication/vwLUAssets/Mobile\_television\_and\_its\_impact\_on\_business:\_T he big picture on small screen opportunities/\$FILE/Mobile television and its impact on\_b

usiness.pdf.

<sup>19</sup> NBP Public Notice # 26, at 2.

<sup>&</sup>lt;sup>20</sup> See e.g., http://products.vzw.com/index.aspx?id=fnd\_mobileTV\_packages; http://www.wireless.att.com/cell-phone-service/services/services-list.jsp?catId=cat1590029&catName=Video+Features&amp; requestid=176042.

pay-per-usage plans that would meter a consumer's monthly online video viewing.<sup>21</sup> In addition to the rates paid for their voice and data plans, consumers can subscribe to a wireless carrier's basic mobile television service, which is a separate service featuring certain national network programming, for around \$10 to \$13 per month.<sup>22</sup> Premium or unlimited services may be available at a higher cost.

In contrast, basic Mobile DTV services will be delivered free to anyone with a Mobile DTV reception device. Premium Mobile DTV services also will be available. As a result of increased competition from local broadcasters' Mobile DTV offerings, the quality and affordability of the wireless carriers' premium services are likely to improve. This healthy competition also could facilitate the unbundling of wireless carriers' mobile voice, data, and video services.

Greater Responsiveness To Demographic Diversity. A significant percentage of the population continues to rely on free, over-the-air local television services, either because they cannot, or choose not to, subscribe to cable or satellite services. Many of these households consist primarily of low-income, elderly, disabled, non-English speaking, minority or rural residents. For example, according to a Nielsen Media Research survey, African-American and Hispanic households were more likely to be affected by the digital television transition than

<sup>&</sup>lt;sup>21</sup> Chris Gaylord, "AT&T: iPhone Data Hogs Better Pay Up," CHRISTIAN SCIENCE MONITOR (Dec. 9, 2009).

<sup>&</sup>lt;sup>22</sup> See, e.g., Sample of 2009 Fall/Winter Season Programming for Verizon's VCast Mobile TV Service, http://products.verizonwireless.com/pdfs/VCASTMobileTVProgGuide.pdf.

Caucasian or Asian households.<sup>23</sup> These same Americans are most likely to have no access, or limited access, to broadband Internet service.

Mobile DTV facilitates and expands the public's access to video broadband services and live, local and national network content. Unlike other mobile broadband services, Mobile DTV is available to every American, regardless of income, age, ability or race. In this regard, Mobile DTV not only is critical to the Commission's mandate to "make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges," but also is vital to promoting the democratic principles on which our nation is built.

Enhanced Content and Services. In addition to receiving the free programming that is available on a television station's primary video stream, consumers will be able to receive a variety of new Mobile DTV channels that are reflective of the diversity of voices in their community. Mobile DTV content will include locally-produced, niche, and foreign language programming, real-time weather and traffic reports, breaking news, live sports information, and information about local events. Broadcasters also will use Mobile DTV to offer an array of consumer-driven services, including live audio feeds, non-real-time data, closed captioning services, video-on-demand and time-shifting features, more efficient delivery of better-targeted advertising for local businesses, and interactive polling.

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<sup>&</sup>lt;sup>23</sup> See The Nielsen Company, "2.5 Million Homes Remain Without DTV After the Transition" (June 17, 2009), http://blog.nielsen.com/nielsenwire/media\_entertainment/25-million-homes-remain-without-dtv-after-the-transition/.

<sup>&</sup>lt;sup>24</sup> 47 U.S.C. § 151.

Expanded Access To Free Public Safety and Traffic Alerts. Mobile DTV enlarges and makes more effective local stations' unique public safety role. Broadcasting is the most reliable wireless communications system for delivering critical news and public safety information during times of emergency, including floods, fires, earthquakes and hurricanes, because it can simultaneously transmit information to a mass audience. Broadcasters also uniquely serve their communities with useful information regarding local events, traffic congestion and other non-emergency disruptions, that enable viewers to make informed decisions as they go about their daily activities.

Mobile DTV makes this system even more robust by providing all this information anytime and anywhere on a variety of mobile and portable devices, customized by market or location. In this regard, three-fourths of respondents in a nationwide survey expressed an interest in using Mobile DTV devices to receive emergency information.<sup>25</sup> In contrast, cellular and other wireless networks are ill-equipped to transmit information to the public in times of emergency or high usage and can reach only the fraction of the public that subscribes to the carrier's service.

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<sup>25</sup> Magid Associates Study, at 2.

#### CONCLUSION

The OMVC looks forward to working with the Commission to help ensure that consumers can continue to receive high-quality video broadcast and broadband services using the most efficient and reliable technologies available. Local television stations are poised to fill this role with Mobile DTV.

Respectfully submitted,

THE OPEN MOBILE VIDEO COALITION

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Its Counsel

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## **ATTACHMENT**



DTV Interactive "Storm" USB Mobile DTV Receiver

Dell Mini 10 Inspiron Netbook Computer with Mobile DTV (Prototype)



LG Electronics Mobile Digital Television with Integrated DVD Player (Model DP570MH)